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THE BUZZ!

#752

Newsletter of the South Western (Ontario) Association of Rocket Modellers

S.W.A.R.M.

The Harvest Classic 2016

3rd Annual Event—Best Ever!

S.W.A.R.M.'s third annual competitive meet, The Harvest Classic 2016, took place over the weekend of November 5-6. There were four official NAR competitors: Matt Turner, Charlotte Halinaty, Grace Halinaty, and team H-Bomb. Although Sunday was the better flying day, most flights took place on Saturday with fairly strong winds.

First up was Set Duration, with a goal of 45 s. Matt Turner was very close with 47 s on his first flight in combined C and Team Division, while Chartlotte Halinaty turned in a 53 s flight for top spot in A/B Division. Matt was awarded a QCR Eggstravaganza 24 kit for his great time. Open Spot Landing came next with unofficial competitor Ron Orr getting his Tri-F-O from last month's Saucer S.W.A.R.M. within 7 metres to take home an MPC Klingon Bird of Prey kit. Charlotte and Team H-Bomb rounded out the top three with Matt Turner and Mike Gallerno having

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H-Bomb's C Egglofter

An Orbital Transport Laboratory – Part II

John Brohm NAR #78048

Figure 1: Artist's Rendering of the US Air Force's Manned Orbital

In Part I of this build story (The Buzz, #4), we introduced the Manned Orbital Laboratory (MOL) concept vehicle the US Airforce announced in 1963. The MOL was to be a vehicle based on the Gemini capsule, and would have been placed in Low Earth Orbit for spying purposes had the program retained its funding. But the proposed program appeared to overlap with too much of NASA's planned programs, and so the MOL was cancelled.

Nevertheless, the MOL managed to inspire a flying model rocket design produced by Ted Nomura of Las Vegas, and these plans appeared as the winning Estes Design of the Month (DOM) entry for June, 1971 (Plan #73). Ted dubbed his design the Orbital Transport Laboratory, OTL-7A; his plan can be found here: http://www.spacemodeling.org/JimZ/eirp_73.htm

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A scratchbuilt model of Ted's design appears on the cover of the 1972 Estes model rocket catalog. The model can be found just above the number "3" on the cover, and an enlargement of the image is shown in Figure 2:

Figure 2: The Orbital Transport Laboratory, DOM Plan #73

As recounted in Part 1, I've been working on my own rendition of the Orbital Transport Laboratory, and we'll resume the build here. At this point in the process, the completed airframe is ready for priming; off we go to the paint shop.

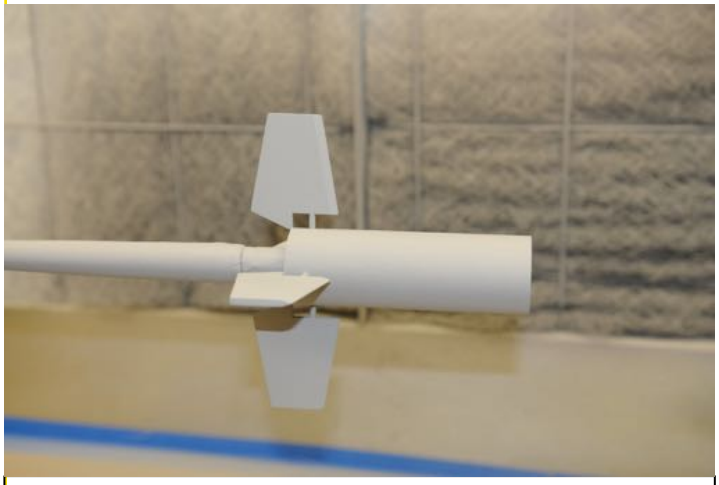

Photo 1: Primed Airframe

While waiting on the airframe to cure, I thought I'd work on finishing the engine bell we spoke about at the end of Part I. Typical of 3D printed parts, the engine bell had the characteristic printed layer grooves in its surface; these are artifacts leftover from the printing process. I filled these with Bondo and wet sanded the part smooth for priming. I used just regular old Rustoleum Auto primer, and once cured, the part was sprayed with Dupli-Color Perfect Match Bright White. I then masked off the cylindrical portion of the bell (to keep it white), and then dusted the nozzle/bell portion with black Dupli-Color spray paint. Once dried, I then

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trouble finding the target. Charlotte continued her good showing for the day, finishing in top spot in the Drag Race using a low-flying, draggy rocket with a huge parachute. She won a LOC Legacy kit for her efforts. Ron turned in the best flight in B Parachute Duration with a time of 71 s; good enough for a win and two Fliskits Pop Lugs. Grace Halinaty flew two good flights on Sunday for the A/B Division win and a QCR Easyslide 1 Rocket Glider. Ron and H-Bomb were the only entries in C Eggloft Altitude and each flew only once. H-Bomb turned in an 88 m flight while Ron's Omloid kit bash reached 29 m. H-Bomb was awarded a QCR Easyslide 1 ½ Rocket Glider. Ron had the only Classic Model flight with an Estes Astron Invader that glided beautifully but looped under boost. Still, he took home a classic Estes V2 kit.

Overall meet champs were Charlotte Halinaty for A/B Division and Matt Turner for C and Team. Charlotte earned a classic Estes Big Bertha kit while Matt received a LOC Lil' Nuke. Thanks to John Brohm and Chris Halinaty for their prize donations.

Complete statistics, including times and altitudes, along with launch pictures and video can be found on the S.W.A.R.M. website.

H-Bomb's C Eggloft Altitude Unwrapping—no cracks!

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sprayed the bell with Testor's Metalizer Lacquer Titanium, #1454. Once this was dry, I highlighted the cooling ridges on the bell with a silver Prismacolor colored pencil. The finished result is shown in Photo 2:

Photo 2: Finished Engine Bell

The airframe was finished in Dupli-Color Bright White, and then masked so that the red trim could be painted. I used Dupli-Color Cardinal Red for the red paint trim.

Photo 3: Seeing Red

Peel away the masking, and voila! Red Trim.

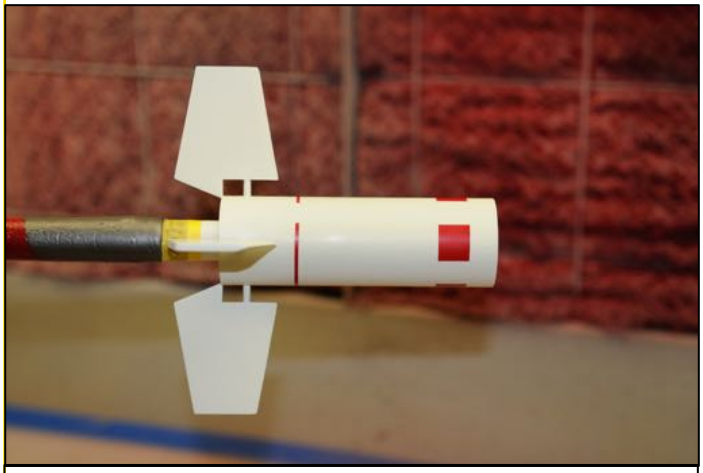

Photo 4: Finished Red Trim

I over-sprayed the model with Testor's Gloss Lacquer, #1961, in preparation for the decals that would come next.

You may have noticed that pretty much all of the paints I used on the model are lacquer-based. This is also true of the Rustoleum Automotive primer; it too is a lacquer. While there's nothing wrong with enamels (other than they take forever to cure), I've been increasingly using lacquers because they cure up hard, provide a tough surface for wet sanding, and they have a very short drying time; this helps to keep the project moving along. Keep in mind, though, that native lacquers are not glossy; if you want a gloss finish you will indeed have to overcoat with a clear gloss spray.

The markings/decals for the model were the next step, and I thought since the markings are custom that this would provide an opportunity for an experiment I had burbling around in the back of my mind.

A few months ago I had purchased a new HP color laser printer to replace my old and slowly failing inkjet printer. While I could print the markings with my ancient ALPS dry ink printer (which I've kept around expressly for decal printing, as it can also print white), I wanted to see if I could get an acceptable result from my new color laser printer. As this model required no printed white markings, it seemed like the opportune time to give the experiment a try.

Using the cover photo of the model as a guide (Photo 2, above), I worked up a set of markings in Microsoft Word, finding very close matches for the fonts used on the original model. I then printed this file on the laser printer, using clear decal stock I had purchased on line from Bare Metal Foil. I've been using BMF's decal stock for years; it's called Expert's Choice, and I prefer it as the film is thin, yet tough. We've all had our issues trying to locate and move a decal on a model, and what I like about Expert's Choice film is that it can handle a fair amount of abuse without tearing or breaking up. Expert's Choice decal film comes in two types, Inkjet and Laser Printer, and it was the Laser Printer stock I was using here.

Well the printout was just fine – sharp and crisp. I then tried a sample to see how well the printer toner behaved in water. I found there was no problem, other than I noticed that if the decal film was flexed too much while handling and applying it that this flexing could cause the toner to flake off from the film. That problem is easily solved by over-coating the printed decal sheet with a clear spray before using the decals.

The other thing to keep in mind is the sheen one

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desires on the finished model. The laser printed decal has a matte sheen; since I had over-sprayed the model with Gloss to avoid any silvering when applying the decals, it meant that the overcoat I use on the native decal sheet should also be Gloss. I can then decide what the final model sheen will be once the decals are applied.

Anyway, experiment essentially successful (I can use my laser printer to make decals!); on to finishing the model.

Looking at Figure 2 back at the beginning of this article, it's clear that the catalog cover model included a representation of solar panels on the model's fins. For my model I searched the internet for some photos of actual solar cells/panels, and found one that looked fairly realistic. I scaled it to the size of the model's fins and then trimmed the image in my graphics software to match the trapezoidal shape of the fins. I then copied the final image multiple times onto a full page in Microsoft Word, and then printed the resulting page with my laser printer onto a sheet of clear decal stock.

After much cutting, trimming, and positioning I had managed to place all of the decals, and then shot the model with one overcoat of Testor's Lusterless (Flat) Lacquer, #1960. Next, the finished engine bell was epoxied on, and then the model was mounted on a display stand that I had prepared for it. The finished model you can see in Photo 5.

Photo 4: Finished Red Trim

You will notice that I haven't placed the metal looking band at the front of the airframe, nor the metal panels that are located at the aft end of the airframe. Looking at my model, I'm not sure I want to add those; I kind of like the thing the way it is. But I suppose I can always add those features later if the mood should strike.

In any case, there you have it - an Orbital Transport Laboratory. Big Brother is watching; you darn Russians had better behave!

Now on the S.W.A.R.M. website: Model Rocketry Frequently Asked Questions. This is the place to look if you are just getting started with model rocketry.

Check it out today!

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free

Check out the S.W.A.R.M. website for more details.

Ready to Launch!