BANTRAK News
A Monthly Newsletter for BANTRAK Members • Volume 33 • Issue 9 • October 2020

The Engineer's Cab: LeRoy Brandimore

Hello all,

For this month's letter I thought I'd share a part of this month's NTRAK President's letter to remind all of us of some valuable information about COVID.

Hi Folks:
Although we are starting to see a few train shows actually happening, we must still remember to be safe: remember the three Ws:
Wear a cloth face covering.
Wait 6 feet apart. Avoid close contact.
Wash your hands often and/or use hand sanitizer.

I would encourage everyone,to please take a look at this month's NTRAK Newsletter if you have not already done so. There is a lot more to the letter, including information regarding an upcoming Zoom TRAK meeting.
The Ws mentioned in the newsletter are important as we approach our layout setup at the B&O Museum and the February GSMTS. I am looking forward to discussing the upcoming shows at this month's Bantrak Zoom Meeting.

In this issue of the Bantrak newsletter we are excited to have another of Ethan's great articles about projects he is building. This month also features updates from Jack Walsh on progress he is making with his layout. I would ask everyone to please submit news about your projects and layout updates so we can all enjoy each other's work.

Happy Modeling,

LeRoy Brandimore

My Pandemic Modeling Update: Jack Walsh

Having finished most of the city scene on my layout, I came to an area about two foot by fourteen inches that I wanted to use as an industrial zone. So for most of 2019, I tried several arrangements of buildings and finally came up with the arrangement in December that I thought looked good. So, with the three meetings at my house at the start of the year, I listened to comments being made about the arrangement and made a few minor changes. Given that I had a lot of time on my hands during the end of March, April and May, I worked on completing that area.

The first step was to outline the major road that went through the area. (Seen above)

The second photo shows the building placement and the main street painted in.

The photo above shows the black driveways and parking lots added. I tried a black permanent marker for the one driveway to make it look newer than the rest which are painted a grimy black.

Next came the one set of stores in this area. As they are viewed from the back, the fronts are blank, but the backs are detailed. To finish the buildings on the desk, they are mounted on a sheet of 10 thousandth styrene. This was the process I used for each block in the entire city scene. It also allows for the sidewalk to be represented very easily. The finished block is shown in the photo above.

My Pandemic Update: Jack Walsh

Photo 5 above shows this block added to the layout with ground cover added.

Finally it was just a matter of placing the buildings and adding additional ground cover, trees, automobiles and trucks to finish the scene, shown in Picture 6. Note that I added a track across the back of the buildings and yes there are box cars on that track. To add something of interest, I decided to 'open' one of the truck doors and have a truck placed partially inside the building. Doing this I discovered that DPM had made the truck doors too narrow and not tall enough. So that building now has a foundation to raise it enough and the door frames were removed to make it wide enough. Overall I am pleased with the final results shown below.

Jack Walsh

Quarantine Time = Modeling Time! : Ethan Bernstein

Building the Aviation Icon of the '40s and '50s
Warning: this is a very lengthy article! Please enjoy!

"Faster than a Mitsubishi Zero," "Largest civilian aircraft of the world," "Luxurious pressurized cabin," and "An aircraft of every role." The Lockheed Constellation had one of the most successful and innovative lives, the precursor to modern air travel and U.S. military supremacy. Prompted by the demands of Howard Hughes for a long range, high capacity pressurized airliner, Lockheed designed and built an aircraft which would see service with nearly every major airliner of the 20th century and several militaries. However, despite TWA prompting the construction of the aircraft, the Constellation first saw service with the U.S. military, in need of a troop and cargo transport during World War II. The first batch of L-049 Constellations were thus converted to C-69 troop transport aircraft, used by the U.S. military until the conclusion of the war when they were then converted back to their initial design specifications for civilian service, finally delivered to TWA in 1945.

Many variants of the Constellation were designed and produced, with the airframe and wing structure changed numerous times, and many different military variants constructed, however, the Connie retained its trademark dolphin-shaped bodies which made it arguably one of the most beautiful aircraft ever designed (and if you cannot tell already, my personal favorite aircraft). The Connie's wing design was based off of the Lockheed P-38 Lightning, utilizing the same revolutionary wing shape on a much larger scale, with the signature tri-tail necessitated due to the Connie's tall stature and the low hangers of the time.

The best known of the commercial Lockheed Constellation iterations are the L1049G Super Constellation and the L1649A Starliner. Less known is the importance of the evolution of the Connie design by the U.S. military and Navy, which commissioned the design and building of the C-121, the precursor to the highly successful L1049G, which saw service as both troop transports and reconnaissance EC-121 Warning Star aircraft in all of the major military campaigns of the 20th Century after World War II, including the Berlin Airlift, the Korean War, Vietnam War, and many other different homeland protection uses throughout the Cold War, one of the few aircraft to see service throughout all of those campaigns without significant airframe changes. A Connie also served as the first Air Force One, Eisenhower's Columbine I, followed by II and III (Columbine I was a C-67, and II and III were C-121s, Columbine II is currently under restoration).

Connies were in service for nearly half a century, surprisingly nowhere near the end of their intended service-lives with very few airframes ever necessitating a major overhaul. The Connie met its end very similar to that of the great Alcos, Limas, and Baldwins when public interest turned to the latest

Quarantine Time = Modeling Time! : Ethan Bernstein

and greatest technology: jet engines. Lockheed's last stand with a commercial piston engine aircraft was the L1649A Starliner, possibly the most magnificent of all Constellation designs, given new wings, further increased passenger and fuel capacity, and even fitted with various experimental predecessors to the turboprop, which, although were actually more efficient than jet engines of the time, were regarded as "old propeller technology" and much of the infrastructure used to maintain such engines was discarded to be replaced by jet engine servicing facilities. And so the century race between Lockheed and Douglas ended with the jet-powered DC-8 reigning supreme, and the Constellation a thing of the past (only for Douglas to later be superseded and purchased by Boeing). Numerous Connies have been preserved, with one still operational in Australia and several others undergoing restoration.

Enough of my museum tour guide tangent, now onto how to build such an icon of aviation in N-scale. After a recent visit to the Smithsonian's Steven F. Udvar-Hazy Air and Space Museum in Dulles, VA, I was struck by a new "exhibit": a glass enclosed case displaying the airplane models built by Mr. Udvar-Hazy himself. With the limited aircraft models available in the 50s during his childhood, Mr. Udvar-Hazy creatively built exquisite small-scale models (between 1:200 and 1:400) of aircraft of the day from matchsticks, paper, plaster, and whatever other suitable household materials he could find, painting them with nail polish. The models really impressed me, and I immediately knew I had to make one of my own.

Of course, I decided on the Connie as the aircraft I wanted to build, specifically an L1049 (my version is an earlier model without wing tip tanks, or perhaps a former C-121 converted to civilian service, both are plausible explanations for not wanting to figure out how to make the tanks). Coincidentally, I had recently purchased several bags of matchsticks from Michael's Arts and Crafts, which I bought to build a loading dock for my Dunder Mifflin Paper mill, as well as a big container of wood glue. I still had loads of matchsticks left, as well as some popsicle sticks, and began construction. I did not use any scale drawings or plans for this model, as I really wanted to replicate the style and look of Udvar-Hazy's models, using my own eye and memory to craft the model. The Connie, however, has one of the most complex fuselage shapes to model, as it tapers from every angle in both the front and back, hence the nickname "dolphin" body. The fuselage of the later L1049 did have more of a cylindrical shape in the center of the aircraft around the wing box, so I started there. I found a wood dowel with a one-inch diameter in my parts bin, and used that as the basis for the center of the aircraft. I began gluing matchsticks vertically around the cylinder, lining the matchsticks up as close as possible to minimize gaps, and ensuring that the matchsticks, which are double the length of the dowel, are centered on the dowel. I used only the straightest of the matchsticks, securing them with a generous amount of wood glue, as the rest of the aircraft wood was attached to the fuselage center.

Once I had completed covering the circumference of the dowel with parallel matchsticks, I began forming the shape for the forward fuselage. With this type of model, you must sand the wood to achieve the desired contour and shape, so there is no need to make the matchsticks align perfectly, but there must be enough wood present to sand with minimal gaps remaining. I first attached a central frame for the forward fuselage to which the angled matchsticks can attach. To make the frame, I glued a matchstick to the interior of the central fuselage section, attaching it to the designated "bottom" matchsticks of the center fuselage (I determined the bottom of the aircraft based on where there were the most gaps. Since I knew I was going to make paper decals for the windows and doors glued to the sides of the fuselage,

Quarantine Time = Modeling Time! : Ethan Bernstein

as well as to color the underbody, I oriented the fuselage so that the largest gaps were on the bottom and sides; remember, you are going for good enough, and everything will be sanded and filled repeatedly, so do not worry too much about large gaps). With the forward center beam in place, I began constructing the bottom of the forward fuselage, gluing a matchstick to the butt of the designated "bottom" matchstick of the center fuselage. This matchstick should be lined up with the center matchsticks, it will be sanded later to a small upward contour.

Next I attached two matchsticks to begin the contour of the forward fuselage, gluing them a space of half a matchstick width away from the center matchstick on the center of the fuselage and gluing the other end to the tip of the bottom center matchstick I just attached on the front fuselage. I continued staggering matchsticks by half and full matchstick widths around the front beam, increasing the spacing between matchsticks as I continued further up the fuselage to increase the angle of the forward contour, with the greatest slope on the top of the fuselage. During the process of forming the shapes, I gradually added more matchsticks to the forward center beam to reinforce the sides and provide a solid gluing point for all of the matchstick tops. The end result is quite ugly, with a whole bunch of matchsticks stacked up in the front. I applied more wood glue to the interior of the forward fuselage, primarily around the points where the forward matchsticks attached to the center fuselage, as well as lots in between the matchsticks at the very front of the aircraft, as this section will receive the most sanding and needs to be quite durable. For the rear fuselage section, I mimicked the construction of the forward fuselage, but reversed the sloping, so the top of the rear fuselage is straight with the center of the fuselage, with the rest of the matchsticks angling up to it, and the steepest slope on the bottom. I again first applied an interior support beam to which the top matchstick was glued, stacking more matchsticks to the center beam as I proceeded, and added more glue to the connection point on the center fuselage and at the tail as with the forward fuselage.

With all of the primary fuselage work complete, and a very rough dolphin-shape visible with lots of gaps, it is now time for sanding, lots of sanding (this step alone took me nearly three days to complete). I started with the forward fuselage, but first I needed to find/build a suitable nose cone for the aircraft in order to properly shape the front of the fuselage. The Connie had a very unique nose, it was quite long and sleek but had a bubble-shaped front. A small glue bottle cap caught my eye (this is why I keep literally everything; occasionally my excessive parts surplus comes in handy), it had the right-side contours and size, however it did not have a bubble-shape on top, just a flat indent. I realized that the flat indent, surrounded by small raised sides, was actually perfect, as the raised sides could contain glue and allow the surface tension of the glue to create a bubble shape. I placed the glue cap on my workbench, and using a micro brush with the brush section removed, I placed a medium-sized glob of wood glue on the tip of the cap, and immediately surface tension was at work, forming a perfect, symmetric bubble. Note: do not touch the glue until it is fully cured, even if the bubble looks slightly crooked, as adjusting it while it is partially dry will only make it dimple (I learned this the hard way and had to reform the nose twice).

Once the glue is fully cured, I then removed the rim from the base of the nose cone and sanded it flush, leaving a very accurate representation of the signature Connie nose. With the nose cone dimensions complete, I could now start sanding the forward fuselage. I began by rounding out the sharp corners of the matchsticks while filing down their size. The Connie had very smooth lines, not sharp angles, so ensuring that there are not remaining matchstick corners is key. I did not cut any matchsticks in making the fuselage, meaning I had to sand many of the matchsticks to length, as they were either sticking out the front side or stacked up too tall in front. Make sure to progress slowly while sanding and continually check your work, as you can always sand more, but you cannot gain back the material you have removed. For reference I used the many Connie models in my collection, checking scaling with various points of reference and ensuring the contours matched. To check my progress, I used the completed nose cone as a sizing and angle guide, making sure to match the curve of the cone in front and not remove too much material. At this step, it is also important to determine

Quarantine Time = Modeling Time! : Ethan Bernstein

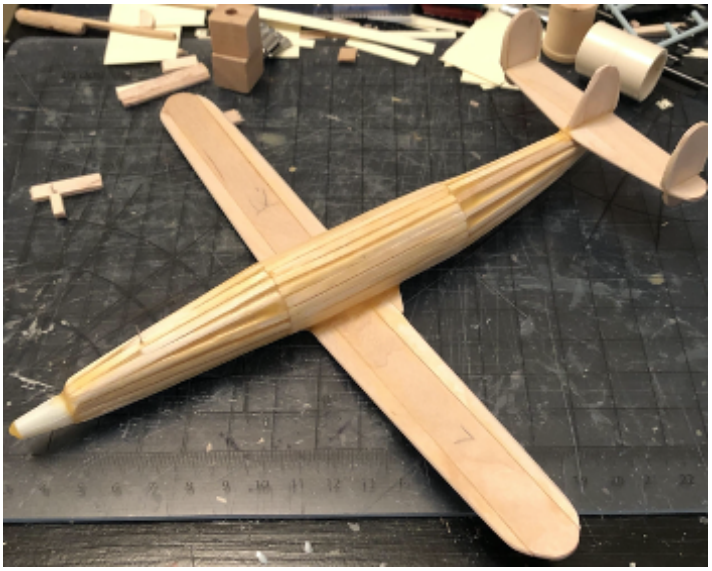
how much wood is needed for the cockpit. Using the nose cone as a guide, I determined that I needed two rows of matchsticks to complete the cockpit (I had to account for the fact that the top row would be sanded flat in front, leaving really only one row for the cockpit). I did not sand the cockpit at this phase as I need to install the nose cone first, but I must next sand the rear fuselage before the nose cone is attached. The rear of the fuselage follows largely a similar curve on the sides; however, it has a different, sharper slope on the bottom. Since there would be no cockpit on this side, I ended up removing a full three layers of matchstick ends, sanding them flat, in order to achieve the slope of the tail.

Once I had completed the rough sanding with 180 grit sandpaper, I then used 220 grit to smooth out the fuselage, proceeding to use increasingly finer grit sandpaper. I then attached the nose and sanded the cockpit into the fuselage. After another round of sanding with 220 grit, I noticed that the gaps between the matchsticks sticks were still very prominent. So, using my trusty Elmer's wood glue, I filled the gaps between the matchsticks, applying more layers after the previous one dried until the glue was near flush with the matchsticks. I use a micro brush with the brush removed for all of my gluing applications involving thicker glues like wood glue. Once I was satisfied with the glue filling (which does largely dry clear so it is important to view the filling under a light source and from several angles to see how much glue there actually is), I then sanded the fuselage yet again, ensuring that no glue protruded and the matchsticks were smooth for paint. It is important to rough up the glue surface with grit sandpaper so that it can accept paint, otherwise the surface is too smooth to properly retain the paint.

With the fuselage smooth and looking like a Connie, it is now time for the wings. The wings, though complicated on the prototype for their time, are quite simple to make using popsicle sticks. The pre-rounded edge of the popsicle sticks meant that I did not have to carve the wing shape from wood, just trim the popsicle stick to the correct length. However, the popsicle stick is too narrow to use for the wing on its own, so I glued wood strips to the sides of the popsicle sticks, sanding the strips to create the angles in the wing and creating leading and trailing edges to mimic the innovative wing used on the prototype, which I especially emphasized on the wing tip where the full tear drop shape is visible. After several rounds of sanding, the wings were complete and ready to attach to the fuselage. The L1049 did not have as prominent a wing box as seen on modern commercial aircraft, meaning the wings could simply be glued to the sides of the fuselage. To make the wing connection as seamless as possible, I sanded the bases of the wings to an angle to match the curvature of the center fuselage. When attaching the wings, make sure they are at a dihedral as on the prototype.

For the tri-tail, I used the curved ends of popsicle sticks as well as matchsticks for both the horizontal and vertical stabilizers. I made the tri-tail as a single piece that I glued on top of the rear fuselage, aligning the center tail with the curved spine of the aft fuselage. Once all of the wings were fitted, I again used wood glue as filler to create the sides of the wing box around the wings and fill in the gaps around the horizontal stabilizers. After several more rounds of sanding, and installation of a small piece of twisty-tie wire just behind the cockpit to simulate the radio antenna, the Connie was ready to be painted. I spray-painted the entire aircraft a glossy white using a combined sealant, primer, and paint. Apply several thin coats of paint, spacing out each coat as recommended by the paint manufacturer, until all surfaces and crannies are covered. Do not worry if there are any minor imperfections in paint coverage, as there is a high possibility that those areas will be covered with a decal.

Quarantine Time = Modeling Time! : Ethan Bernstein



For the remainder of the "paint" on the model, I designed decals on my computer, using assorted shapes and referencing my models to create a proto-color scheme and proper number and size of windows and doors. I also designed gray decals for the wings and tails, adding aileron and trim details, as well as gray decals sized for the underbelly. With the paint dry, I printed, cut, and sanded the decals to tone down the thickness of the printer paper. Using a very sparing amount of glue and handling the exceptionally thin decals with tweezers to avoid tearing, I lined up each decal in their respective positions. The currently only remaining Connie in flight, based in Australia, wears old Qantas livery but with the word "Connie" in place of "Qantas." I wanted to replicate that look, hence why my model bears the name. Other decals include red striping on the tri-tails and the aircraft number: N1049 (can you guess how I came up with the tail number?). The engines are crafted from cardstock paper, folded, cut, and bent to shape around a small plastic washer, with small strips of wood forming the intakes. Each nacelle was painted with silver Sharpie, and a cylindrical wood dowel was sanded to a rounded point and glued inside the plastic washer to simulate the point of the propeller shaft. I did not make propellers (yet) for this model, as I do not think they will hold up well when made of paper, and like the clean look of the model without them, seemingly in flight, which since I also did not construct landing gear, looks realistic. I also painted the nose, leading edges, tri-tail, and cockpit using black Sharpie, as well as the trailing edge with gray Sharpie.

I am very proud of the model, as not only have I scratch built a recognizable model of my favorite, and one of the most iconic, aircraft of all time, but I also captured the look and feel of Udvar-Hazy's models from the '50s, models which I very much adore and admire. The fact that the model is very close to N-scale was merely a happy coincidence, as I scaled the model according to such dimensions as the length of matchsticks and popsicle sticks, not scale dimensions. Building this model was a very different experience from my typical scratch builds in a very welcome change of pace, as well as type of build, and I hope to definitely make more similar models in the future (I have already been pondering making the TWA Starliner that was transported to John F. Kennedy Airport for the TWA Hotel as a trailer load, and possibly a DC-6B/DC-7, the direct competitors to the Connie).

I hope you enjoyed this article, or at least learned something about one of the classics of aviation history! Thank you for your time and patience! As always, feel free to reach out with any questions/comments/suggestions. Next I will cover (in a much less lengthy article) converting N-scale Rio Grande three-bay open hoppers to modern CSX cars.
Stay safe, healthy, and play with trains,

Ethan Bernstein

Train Spotting: Ethan Bernstein

The eastbound Capitol Limited screeches through Point of Rocks Marc station on its way to Washington, D.C., lead by P42DCs 25 and 94 running elephant style with six Superliners.

BANTRAK was founded in 1983 as the Greater Baltimore N-Scale Associates. Begun as a “round robin” group to share skills and experiences, we have expanded our focus to include participation in many diverse activities to promote model railroading in general and N-Scale model railroading in particular. Activities include participation in local, regional and national shows, meets and conventions. BANTRAK membership includes membership in the national NTRAK organization.

The BANTRAK Newsletter is the official publication of Baltimore Area N-TRAK (BANTRAK), Inc.
This is ***your*** newsletter! Please send articles, photos, and suggestions to newsletter@bantrak.net
Editor: David Betz

BANTRAK 2020 Calendar

October 18, 2020
Club Meeting
Location: Zoom Meeting

November 15, 2020
Club Meeting
Location: Zoom Meeting

December 16, 2020
B&O Museum Setup and club Meeting
Location: B&O Museum

December 17, 2020 - January 3, 2021
B&O Museum Festival of Trains
Location: B&O Museum

BANTRAK Membership: Al Palewicz

BANTRAK does a significant amount of charitable activity, although we rarely think of it that way because we get pleasure out of it. When you think about it, that is as it should be with all giving from the heart.

What is our charitable activity? Our major participation is in the B&O Museum's (which is a charitable organization) Annual Festival of Trains. Our display has been a major draw for people to come to the Museum for many years, both recent and in the past. There are plenty more examples, this is just one.

Please contact Treasurer Tim Nixon for more information regarding your membership status and roster questions or contact Al Palewicz with general questions.

Member Benefits:

- Sharing of your knowledge (railroading and modeling) with others of similar interests
- Access to railroading and modeling knowledge of other members
- National exposure and recognition of your endeavors in modeling
- Hands on activities: Club modules - track, wiring and scenery. Raffle layout - track and scenery Members' layouts
- Recognition as being part of a Nationally known club.