

# Making Aerodrome 1.1 Panels & Markers

By Andre Kruppa

For a number of years I wanted to play and run Aerodrome 1.1 and I liked the idea of the wooden panels giving the feel of a WWI era game. To that end I looked into buying panels and there was a huge backlog of orders and it could not happen for some time. I thought it should be an interesting project to make my own. This turned out to be quite a task!

Panels are now available for folks to order from a reliable supplier and can be ordered via RLPBS or directly from the Aerodrome 1.1 web site. At the time I started this was not an option and after this learning experience, I recommend purchasing them! That being said, a lot was learned from this project.

The first thing to do was determine a layout based upon the design in the book. The basics are defined by the rules and the design is dictated by that. I did not stray too far from the original layout.

The first thing that had to be done was to decide the basic shape of the panel. The typical panel uses a circular shape. Before I got too far into it, I consulted with my friend Jerry who has a lot of shop experience and we agreed that cutting a half circle shape was very difficult given our equipment and so I chose to use a square with the corners trimmed off at a forty-five degree angle. This looks like a cockpit from a number of planes so I did not feel that I was compromising unduly.

Once the shape was determined, I did full scale hand drawings of the layout. This worked pretty well and I was able to come up with a size and shape that we could fit all the needed elements into. I passed these around for a folks to have a look before moving on. There were three basic panels: Cockpit (Aircraft Control), Machine Gun (Secondary Guns), and Anti-Air (All Anti-Air). I added anti-air since we were doing it anyway. Most folks use Machine Gun panels for the AA.

The next thing to do was make sure of the markers. After doing some web research, I picked a vendor and ordered a bunch of nice looking Cribbage Pegs to use as markers. These were Black for Maneuvers, Red for Damage, and Blond (unstained) for Altitude. A friend that works at a scrap metal company was kind enough to supply some sample .22 shell casings, used as Ammo Markers, for sizing.

Once we knew what the pegs and markers were going to be like, it was time to select the wood and get going. After a good look around and from prior experience I chose to use oak. I like the look of blond (unstained oak) which a friend of mine suggested many years ago for my game table.

After all of the preliminary work was done, it was time to start actual work. My friend Mike and I trucked up to Jerry's shop with a bunch of oak stock, a series of drawings, photocopies of the layout, and a cut list prepared with a spread sheet. It all was very promising.



*Blank panels ready for the next stage*

In order to make sure that everything worked out well, I padded the number of final panels so we had a margin for error. I needed sixteen and obtained enough for twenty. The first thing we did was cut the basic shapes for all of the stock. This step worked out quite well and was performed in a series of stages, setting up the cross-cut saw for each cut and then doing them all before moving on to the next stage.

Next was drilling the holes into the panels. This certainly seemed simple enough, but turned out to be rather more complicated than we thought. The original idea was to mark the prospective panel blank with a paper template. This did not work out so well and the panels did not match exactly. The slight drift caused by minute differences with placement and the bit hitting the wood made for too disparate spacing between holes. This was despite the fact that we were using a good drill press. The holes simply did not line up vertically. Next a punch was tried to get the holes to remain even. With a paper panel template attached a simple punch was used to place a hole to guide the bit. This did not work out so well either and had a similar result. After some discussion it was time for some brainstorming and research.

In the end to get the holes to line up consistently a template was used. We picked up some more oak and made templates with oak. In the long run, especially if we were going to turn out a lot, we probably would have used sheet metal, but for the limited run oak seemed appropriate. Guides (joining plates) were placed along

the edges and the template was clamped to the panel. A few were made and inspected and the three of us agreed the result was acceptable. Two templates were made to allow for potential wear and to make sure we could fabricate more in the future, if needed. This was quite a victory after a struggle with the alignment. We were pretty happy to make substantial progress after the initial setbacks.



*Panels in progress to the next stage.*

Panel production then began in earnest. While Mike drilled the main panels, which involved a bit change each time, Jerry and I worked on the next panel setup. Mike must have pulled that lever nearly two thousand times just for this stage of the project.



*Machine Gun panel templates*

Templates were then made for the Machine Gun panels and the AA panels. In a similar fashion to the last, guides (made again from joining plates) were placed on the edges and these were clamped to the blank. These were pretty tricky to get right because of the proximity of the holes. Mike pulled the lever well over a thousand times for this stage! It was a little faster because there were fewer holes and they were all the same size since these panels used .22 shells only.

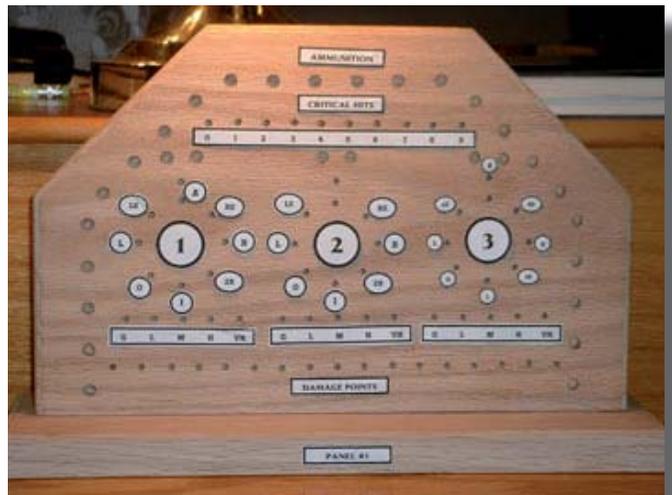
While all of this drilling was going on, we kept the table router busy. Each panel was given a basic bead on the edge. This makes for a nicer appearance and was done after the drilling to make it easier to line up the template. After this the pieces went to final sanding.



*Control panel being assembled in the jig and on the drill press*

The next stage was assembly. The panels were to be mounted with wood screws and glued to a base. A simple jig was made for the assembly of each panel. The jig held each part in exactly the same place. The parts were then clamped in place and drilled. Glue was applied and then each panel was screwed together while still in the jig. After this the panel was removed, excess glue wiped off with a rag and warm water, and then the next panel was done.

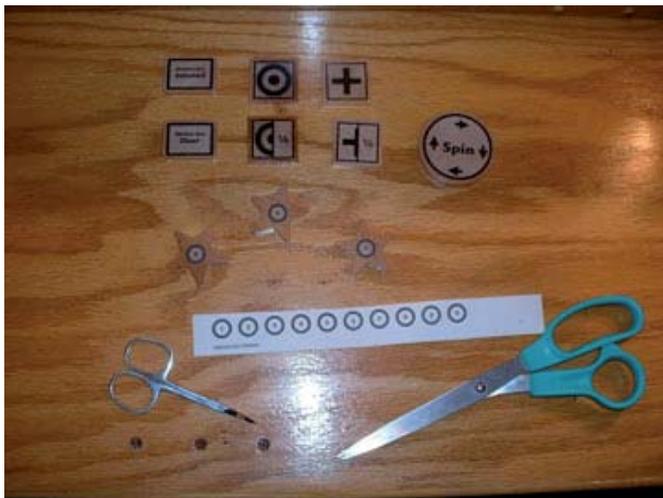
Completing all of the assembly was very exciting. We had practically moved into Jerry's house for a little over a month and spent a lot of weekday evenings and every weekend up there for a while. I doubt it broke either of their hearts to see this stage end!



*Panel mockup with paper labels*

Next was the finishing work of which the biggest piece

was labeling. After some consideration, I decided that I would make the graphics in a word processor with basic drawing tools. After some trial and error, I came up with a design that seemed to work well and made paper mockups to be sure it would work.



*Marker examples and labels being trimmed for use*

Part of this process also involved making the wooden token markers that would be used in play. Such markers are things like Tailing Chits, Kill Chits, Machine Gun Jammed Chits, and Spin Markers. I ordered wooden parts from a craft supplier and made mock ups of these as well.



*Panels being labeled with stickers*

After a good look around on the web, I settled on using decal paper to print the designs and then apply them. This was tested first on some markers, since there was no labor investment to speak of in them. The markers were given an initial coating of clear acrylic spray. After twenty-four hours the decals were applied. These curled up in the drying process and did not remain affixed to the wooden parts, despite the fact that the instructions were followed exactly.

After some casting about for another solution, I came

across clear full paper size sheet labels. A test of these yielded much better results. Markers were tested again and the labels seemed to stay. Finish work began in earnest at this point. Labels were printed and cut out by hand. Then each panel was labeled and sprayed with a number of coats of clear matte acrylic.



*Panel drying after an acrylic coat was applied*

The clear acrylic worked well and the labels seemed fine for the most part. There were a few snags here as well. The Machine Gun markers were made as double-sided and because masking tape was used to affix them to the cardboard for spraying, which pulled a tad upon removal, the labels have curled partly off on a few of them. This seemed easy enough to fix with glue. Some larger markers were also made and mounted on five by six inch block to point toward the Allied and Central Powers rear areas. These wrinkled after several months and show that large surface areas are a problem. Fortunately the regular panels seem to be holding up well.



*A batch of panels drying*

One other thing that I learned from this is that the gloss acrylic spray is much harder than the matte and takes a lot less coats. I used matte to try to keep the glare down but in retrospect I would use gloss for all of it, as it re-

quires fewer coats.



*Labels being applied to panels*

After all of this, it was then time to try them out. Test fitting of the pegs indicated that they would work well once the panels were broken in a bit. There were issues with the diameter of the shell casing holes, which were made a tad smaller by the many coats of acrylic spray. These were re-bored by hand. Another interesting thing to note is that the size of the .22 shells seemed to vary ever so slightly and some fit well and others were just a wee hair to big to be easily removed once put into the panel. Test fitting and re-boring was required for all panels and some shells were discarded.



*Tailing Chits drying between coats*

Once the right shells are separated from the rest polishing was required. A number of products work well for this and a rock tumbler was also tried. The tumbler does clean and polish the shells but it does not produce a glossy sheen like Brasso or a similar product.

Finally after all of this work it was time to play. Stands were prepped and models mounted. The air became filled with the sounds of excited gamers and the imagined sounds of machine gun fire. The game was as fun

and simple as I recalled and it is easy to play two planes each and run three large dogfights in a single evening.



*A panel in use!*

I learned a lot from this project and it was quite interesting. Next time I am buying panels! That being said, I can now approach a number of tasks in the shop knowing from hard won experience what will work and not work. I also had a LOT of help from some good friends. The camaraderie and problem solving experience was well worth it!



*Allied bombers attacked by Central Powers fighters*



*Wings of War Albatross DVa*