HCR MASSACHUSETTS AMA

AMA Charter #341



November 2020



Attention all, the portapotty has been cleaned out and locked for the season. Crappy news I know, but don't worry there are plenty of trees to go behind! Totally kidding of course, there are a few gas stations just up the road in case you need to go.

Bill Ewers

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Meeting Notes from Saturday, October 3rd, 2020

Quorum Present. 21 Members including 4 Executive Members present

Executive Members present: Ron Paul, Mike Shaw, Santiago Mercado and Bill Ewers

Members present: Liam Ewers, Alan Crawford Sr., Alan Crawford Jr. Tracy Page, Mike Booth, Paul Paschetto, Tom Tenerowitz, John O'Grady, Ed Kopek, Pete Cincotta, Bill Jaciow, Dan Kapinos, Gordie Lauder, Leland Johnston, Rick Nadeau, Bob Prosciak, and Mike Prosciak.

Fall Barbecue was well attended and was a fun day of flying! Thanks to Chef Ron!

Thanks to the ground crew for keeping the lawn mowed and ready for flight.

Nominations for club officers and voting will be conducted at the November meeting.

Club finances for the month of September were reported and approved.

Upcoming schedule is as follows:

10/17/20 - Fall Tailgate Swap Meet

Fall Field Clean Up Date TBD

Safety Review:

- 1. A video was posted of a small helicopter flying through the pit area. This is a violation of club safety policy. Please remember that we are all responsible for safety at our club.
- 2. Buddy boxes should always be used for training new pilots.

New member application from Eric Wroblewski was voted into the club.

Article Submitted By Ron Paul

Making Strong Wood Splices

Gerry Yarrish
Featured News, How-tos
6 Comments



I was sitting under a shade tent at a giant-scale fun fly recently when someone asked me where I got the longer-than-standard-size materials I use to build my big airplanes. I didn't know what the fellow meant. He told me that his local hobby shop carried only 36-inch lengths of balsa and spruce, and that 48-inch-long sticks were available only by special order. I said that I regularly splice my stringers and spars and think nothing of it. "But how do you do it safely?" he asked.

These tips show some common construction techniques and how wood splicing should be done.

Strong Splices

When you want to turn two pieces of wood into one, you can't simply glue them together. Some cutting and fitting is necessary so that the splice will bear as much stress as the original wood pieces. To accomplish this, you have to increase the gluing area for the splice by cutting the two mating surfaces in a diagonal line.

The weakest, least supported joint you can make is a simple butt joint. Gluing two pieces of wood together end to end provides very little surface area for the glue. Overlapping the two pieces is a much stronger way to join them, but if you want to use the part as a stringer or a spar, the overlap isn't practical because the pieces are not

attached in a straight line. A diagonal splice keeps both pieces in alignment. As a general rule, I make the length of a splice at least six times the thickness of the material being glued together—roughly 3 inches across for a 1/2-inch-square spar.

To make the two pieces match precisely, I first tack-glue the two parts on top of each other with a few drops of thick CA while making sure the edges of each stick are flush. I then draw a straight diagonal line at the ends to be joined (see photos). I use my band saw to make the cut, and I make certain it is square to the top edge. I then sand the cut surfaces (still glued together) smooth with a belt sander. When the two parts are separated, the two angled surfaces match perfectly.

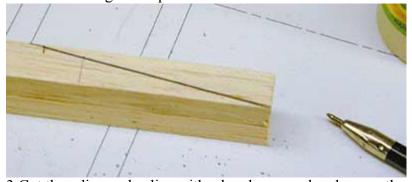
To keep the two pieces aligned when I glue them together, I use a simple, wooden alignment jig. The jig is made with a flat base and two guide pieces (rails) glued on top that form a space between them that's the same as the thickness of the pieces being glued together. For the jig shown here, I used pieces cut from an old yardstick to act as rails. I also use a piece of Great Planes' Plans Protector material to prevent the parts from being glued to the jig when the adhesive oozes out of the joint.

To form the glue joint, I place one piece in the jig and spray it with a light mist of kicker. I then apply CA to the second piece and slide it into the jig and up against the first piece. After the glue has set, I use a sanding block to sand the face of the joint smooth. I then turn the part over and sand the opposite face smooth as well. That's it. No magic—just a very strong joint.

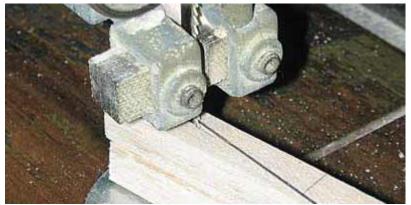
1 Start by tack-gluing the two pieces to be spliced together with CA and kicker. Use just a couple of drops of glue.



2 On the ends of the pieces, draw a diagonal line that's about six times as long as the pieces are thick.



3 Cut the diagonal splice with a band saw, and make sure the cut is square to the top edge.



4 Sand the cut edges smooth with a belt sander.



5 Here, the two longerons are ready to be glued together.



6 I use this simple jig to keep the pieces in alignment while the glue dries.



7 The finished splice.



8 For additional strength, I positioned the splice against the plywood side sheeting.



9 Here you see the splice positioned close to a cluster junction where other fuselage members join.



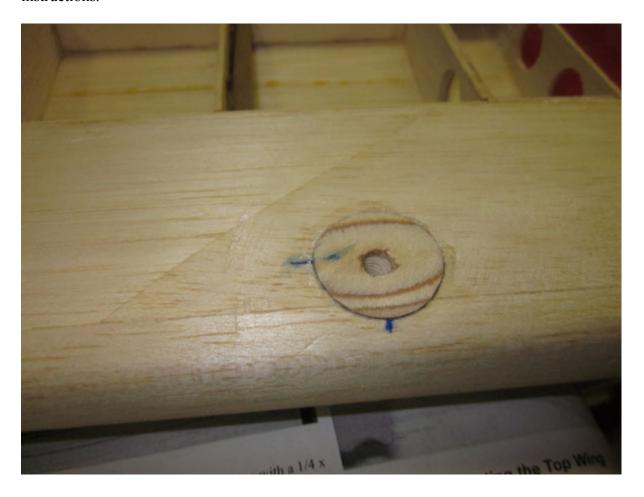
10 By increasing the gluing area that holds the joints together, these 1/32-inch gusset plates add strength to an already strong fuselage structure.



11 This is a close-up of an internal gusset plate used to strengthen a lower fuselage longeron. These are used when you want a flush outer model surface.



Here's a sheeting joint using similar thinking, from my Balsa USA Fokker Dr.1 Triplane. All according to the instructions.



Airplane of the month: Scaled Composites Model 281 Proteus

Burt Rutan designed the thin, tandem-wing Scaled Composites Model 281 Proteus, first flown in the late 1990s, to investigate the use of aircraft as high altitude telecommunications relays. Thanks to its efficient design, this model was able to fly at 65,000 feet for over 18 hours. However, the rise of unmanned aircraft means that



flying a piloted aircraft for this kind of longendurance missions is just unnecessary.

Upcoming Events:

November meeting 11/5 AT The VFW 7

A Special thanks

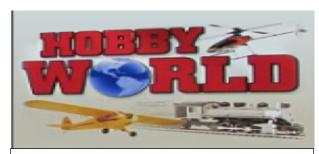
A special thanks was given by Eddy Kopec. He was very grateful and very warmed by all the birthday cards and wishes he received from everyone. I know I speak for everyone when I say how appreciative we all are for everything he does and has done for this club. So congratulations Eddy on another year of life and many, many more to come.

-Alan

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