

FlightLine

A Monthly Publication of Collins Model Aviators

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Thoughts on Trainers

By Crist Rigotti

Just recently I was looking at an LT-40 kit. I noticed that the wingspan was 70 inches and had an area of 900 sq. in. I thought that is a big airplane for a 40-sized trainer. I then started looking at the LT-25. Here is a side by side comparison:

	LT-40	LT-25
Wingspan	70 in.	63 in.
Area	900 sq./in	724 sq./in
Weight	5.5 - 6 lb.	4 - 4.3 lb.
Wing loading	14 - 15.5 oz.	12 - 13 oz.

As you can see the LT-25 is not that much smaller. Here are my thoughts. With the trouble people have getting off the grass, wouldn't a 40 or 46 work better in the LT-25? I realize that the LT-25 has a smaller fuselage and it might be made out of balsa rather than lite-ply. I don't have the plans for the LT-25 to see if a 40-size engine would fit, not only width wise but prop clearance too. The LT-25 is a tail dragger, therefore it will only have 2 large (read Tundra) wheels dragging

through the grass rather than 3. The wing loading would probably be the same because the larger engine on the LT-25 would increase the overall weight. It certainly would be easier to transport.



for the club trainers, but remember this is just food for thought. I think that a 63 in wingspan, 724 square inch wing would do very well as a trainer. Lightweight is always a plus. Remember lighter flies slower, and with the added HP, take off would be a lot easier. No more hand launches! Tail dragger aircraft are no harder to handle on the ground, than one with a nose gear provided that the tail wheel is set up properly. There must be a good reason why SIG went to conventional gear on their smaller trainer. If anyone has the plans for an LT-25 then we can really see if this is feasible. Just food for thought guys.

Crist Rigotti, CMA Safety Officer →

A special thanks to Crist for volunteering to help round up future articles for the FlightLine.

Jim Doty, FlightLine Editor

CMA Web Page Addresses:

<http://bbs.cacd.rockwell.com/data/clubs/cma/>
<http://members.xoom.com/cma3257/>



Collins Model Aviators
Academy of Model Aeronautics
Charter Club #3257



Aircraft Web Sites

by Larry Kerns

As a beginner to the hobby and one who likes to build things, I am instantly drawn to the “glamour” of scale aircraft construction. I am particularly fond of WWII and pre-WWII aircraft although WWI planes also have their appeal. Finding information on these aircraft, though, can be difficult unless you stay with the popular planes for modeling. I have always had a fascination with the pre-WWII Navy carrier biplane Grumman F3F-1 which when painted with the squadron commander scheme is a beautiful aircraft. SIG used to make it in kit form but discontinued it several years ago. You can't even get a copy of the plans anymore. I'll never be able to understand why you can't get a copy of ANY plan ever made by the magazines or model makers even if the kit is no longer available. How much effort and expense can there be to storing ONE master plan with which to make copies if ordered? Anyway, back to my original problem. Assuming I can get a plan, how do I check out the details and color schemes for the model? Answer, the Internet, of course!

Interestingly enough, there are a considerable number of websites on the Internet devoted to old and new aircraft. These websites range from the amateur collector of information to professional and military organizations. As it turns out, information (and usually photos) are available for just about any aircraft that you might be interested in. For instance, I found my Grumman F3F-1 on <http://aerofiles.com/home.html> by selecting the aircraft tab, selecting the aircraft manufacturer and scrolling down the F3F-1. Complete FlightLine

specs and some photos! The photos were in black and white, of course, but at least I could see the details of the markings.

Further search on the web revealed another great site <http://www.militaryaviation.com/> which had a color picture of my F3F-1 in one of the museums! Wow! Another aircraft site with more specs and photos (back & white) of my plane is located at <http://www.aero-web.org/>.

Many other websites exist for the aircraft enthusiast with the following being the most notable that I have found:

- <http://www.geocities.com/useours/Aircraft-index.html>
Jim's Index to Military Aircraft Pictures. Prop-driven, jets, WWI, WWII and even some Soviet and British aircraft. Not comprehensive but extremely useful for some aircraft types.
- <http://www.ixpres.com/ag1caf/usplanes/american.htm>
American Aircraft of World War II. Photos and specs on almost every aircraft of WWII. Many of the photos are in B&W but we can't have everything!
- <http://www.geocities.com/aw3aw3/archive.htm>
WWI Aviation Image Archive. Repository for old WWI photographs of aircraft, pilots, dirigibles, etc. Very interesting
- <http://philc.ncms.org/aircraft.htm>
Phil's Aircraft Page. Very interesting photo repository of pre-WWI, WWI and WWII (both allies and axis) aircraft. Some of the photos are of ancillary aircraft equipment such as floats, etc.
- <http://www.vmapa.com>
Vege's Military Aircraft Picture Archive. This site is dedicated to jets but I thought it might be interesting to some.
- <http://www.history.navy.mil/branches/nhcorg4.htm>
Naval Aviation History Branch (US Navy official website). Contains information on obtaining



copies of the original aircraft plans from the Navy!

- <http://www.wpafb.af.mil/museum/ind/ind.htm>
USAF Museum Display Index (USAF official website). Has photos of many of the aircraft located in the museum



These websites, of course, only scratch the surface of what's out there. Many of them have links to dozens of other equally fascinating and informative sites. The point is obtaining details of older aircraft for the purposes of scale construction and detailing is not that difficult anymore thanks to the increasing popularity of the World-Wide Web. Get out and explore for yourself and share your finds with other club members.

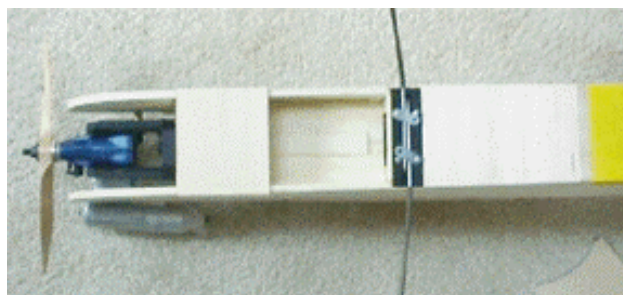
Larry Kerns →



LT-40 Tail-Dragger Conversion

By Frank Gutierrez

The LT-40 converts very well to a tail dragger. As a matter of fact I recommend this configuration over tricycle gear. If you are going conventional gear I recommend that you build it that way and don't add the capability for tricycle gear later. No need to. If you plan on adding floats in the future you can easily glue a block or piece of plywood at a later date.



Now to begin:

1. You want to move your landing gear block to the leading edge of the wing. The location is right behind the first former as to be touching the former when glued in. The 1/8" main gear is very weak and someday I will find the right size aluminum gear to bolt on mine. In the meantime I bend the heck out of my gear to compensate for the drag in the grass. So far that has worked well and I haven't been in too much of a hurry to get new gear.
2. I used the Du-Bro .60 size tail wheel bracket for the tail wheel. You will also need a length of the same diameter music wire that comes in the package and a one-inch tail wheel.



(a) drill a vertical hole through the fuselage at the trailing edge of the vertical stabilizer. The hole must be the same diameter of the music wire or slightly

smaller so it is snug. Be careful to get the hole straight because the wire will be bent to go into the rudder.

(b) Put a small drop of thin CA on the holes to strengthen the wood around the hole. Do not plug the holes with CA.

(c) Bend one end of the music wire 90° 3/4" back.

(d) Mark the leading edge of the rudder at least 1" up from the bottom to drill a hole for the music wire.

(e) Glue a piece of 1/8" plywood on the inside bottom of the fuselage. You need this to screw the tail wheel bracket to.

(f) Test fit the rudder with the tail wheel wire in place and also the tail wheel bracket. Mark where the tail wheel bracket will be mounted on the fuselage.

(g) pre drill the holes for the screws being careful of the alignment so there wont be any binding of the music wire. Mount the bracket.

(h) Test fit the pieces again and mark the music wire where the first bend will be. Do not bend the wire until the frame is covered.

(I) Remove the tail wheel bracket and finish covering the plane.

When you get ready to install the rudder:

1. Attach the tail wheel bracket,
2. Epoxy the music wire to the rudder getting plenty of glue in the hole (note: I put thin CA in the hole prior to gluing so it bonds the fibers and makes the hole strong. Do this with ailerons also)
3. Insert the music wire through the fuselage and glue the hinges in place. (note: USE Du-Bro large plastic pin hinges NOT Ca hinges!).
4. Now you can bend the music wire to the proper shape using the short tail wheel music wire you received in you package as a guide.
5. Install the 1" tail wheel. You can use small wheel collars to hold it on. Carefully soldering on a small washer or nut works also.

Congratulations you now have a tail dragger!

FlightLine

And you thought that fixed wing solo requirements were tough.

By Frank Gutierrez

This year I thought I should try the helicopter thing and see what it was all about. It was a big step and a hard decision to make but I convinced myself I should give it a try and fulfill a boyhood ambition.

After demonstrating to the instructor that you can take off, hover in one spot and land safely multiple times you are cleared to practice hover pad maneuvers on your own. Some time on the simulator helps prior to practicing each maneuver for real. The following list is progressive and should be accomplished in the order shown.

Hover Pad Maneuvers

1. Hover in front of you full tank of fuel staying in one spot.
2. Hover sideways and back to front both left and right.
3. Hover forward and back.
4. Hover then climb 6 feet then descend.
5. Hover 45° both left and right.
6. Hover 90° both left and right
7. Tail in circle in front of the pilot both left and right
8. Constant heading circle in front of the pilot both left and right.
9. 90° circle around the pilot both left and right.
10. Mini auto rotation no higher that 4 to 6 feet.



The second step to Unlimited Access solo is demonstrating forward flight maneuvers. These maneuvers are a transition from one discipline to another and back again.

Forward Flight Maneuvers

1. * Noodle both left and right always turning away from you.
2. Extended noodle both left and right.
3. Standard approaches from both left and right.
4. Figure 8 from both left and right.
5. Fast forward flight.
6. Loop from left and right.
7. Roll both left and right.
8. 180° Stall turn both directions.

* Noodleing is flying back and forth left to right, and right to left in short distances at low altitude and slow airspeeds.

Frank Gutierrez,
CMA Senior (fixed wing) Flight Instructor. →

Heads Up, CMA Activities

November 2000

2-Nov 5-6 PM Meeting at Main Plant Cafeteria ***Nominations closed**

9-Nov 6-9 PM Build session

17-Nov 5:00 PM Flightline deadline

December 2000

7-Dec 5-6 PM Meeting at Main Plant Cafeteria

***Election held**

14-Dec 6-9 PM Build session

22-Dec 5:00 PM Flightline deadline

CMA voice bulletin board 295-8888

✉ **Send your input for FlightLine to:**

James H. Doty

MS 108-205 x5-2931

jhdoty@collins.rockwell.com

AMA events web page:

<http://www.modelaircraft.org/Comp/Contest.htm>

For an AMA membership application:

<http://modelaircraft.org/Mem/Memapp.htm>



Send your input for the CMA Web Page to:

Steve Plantenberg x5-9625

scplante@cacd.rockwell.com

2000 CMA Staff

President: Jamie Johnson..... x5-0984
Vice President: Gregg Lind..... x5-0008
Secretary/Treasurer: Chris Heald..... x5-0793
Field Marshal: Mark Woytassek. x5-4332
Safety Officer: Crist Rigotti..... x5-0612
FlightLine Editor: Jim Doty..... x5-2931
Web Page Editor: Steve Plantenberg.. x5-9625

Senior Flight Instructors and Test Pilots

First flights of new airplanes:

Frank Gutierrez

Mark Woytassek

First flights of new helicopters:

Crist Rigotti

Flight Instructors in training:

Irv Anderson

Jamie Johnson

Steve Plantenberg



For membership information:

Contact: CMA Secretary Chris Heald

MS 105-191, x5-0793

cdheald@collins.rockwell.com



CMA Friends

**Academy of Model Aeronautics
5151 E. Memorial Drive
Muncie, IN 47302**

**Box-Kar Hobbies
3661B 1st Ave. S.E.
Cedar Rapids, IA 52402**

**Hobbytown
2737 16th Ave. S.W.
Cedar Rapids, IA 52404**
