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FOR '95
Info on EAA Flight Advisor Program
See Page 140

CUSTOM BUILT SPORT AIRCRAFT HANDBOOK

A Guide to Construction Standards for the Amateur Aircraft Builder



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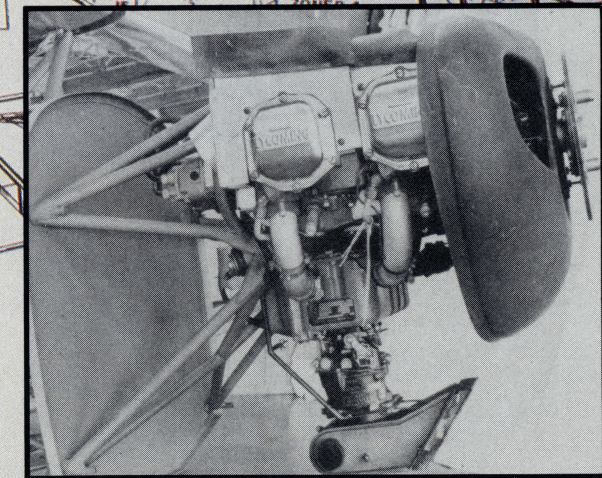
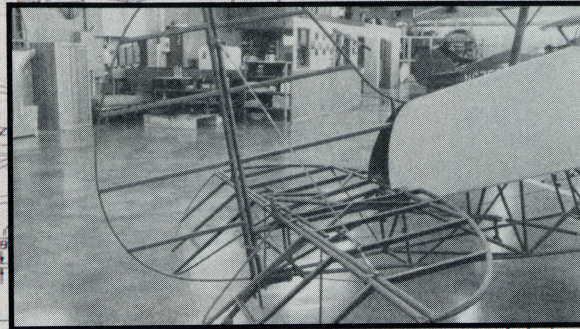
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Homebuilders!

They are a special breed! Dedicated. Skilled. Determined. Unafraid to tackle even the most difficult project. Yet however complicated construction becomes, they invariably display a tenaciousness that will not detract them from projected goals.

A homebuilder who exemplifies these characteristics is J.V. Withrow of Central City, KY (left). Withrow was 47 years of age when construction of the Starduster II in background was started. He had absolutely no experience around airplanes — did not know how to fly — had never worked with any of the materials and systems that go into a tube and fabric airplane. He was not deterred, however. "How to" publications were purchased and he proceeded to educate himself with aircraft building techniques. When construction started he sought the help of other EAA members for advice when problems arose. He attended forums and workshops at Oshkosh. Every situation was met head on, and he proceeded only after each component was completed according to his own rigid standards of perfection.

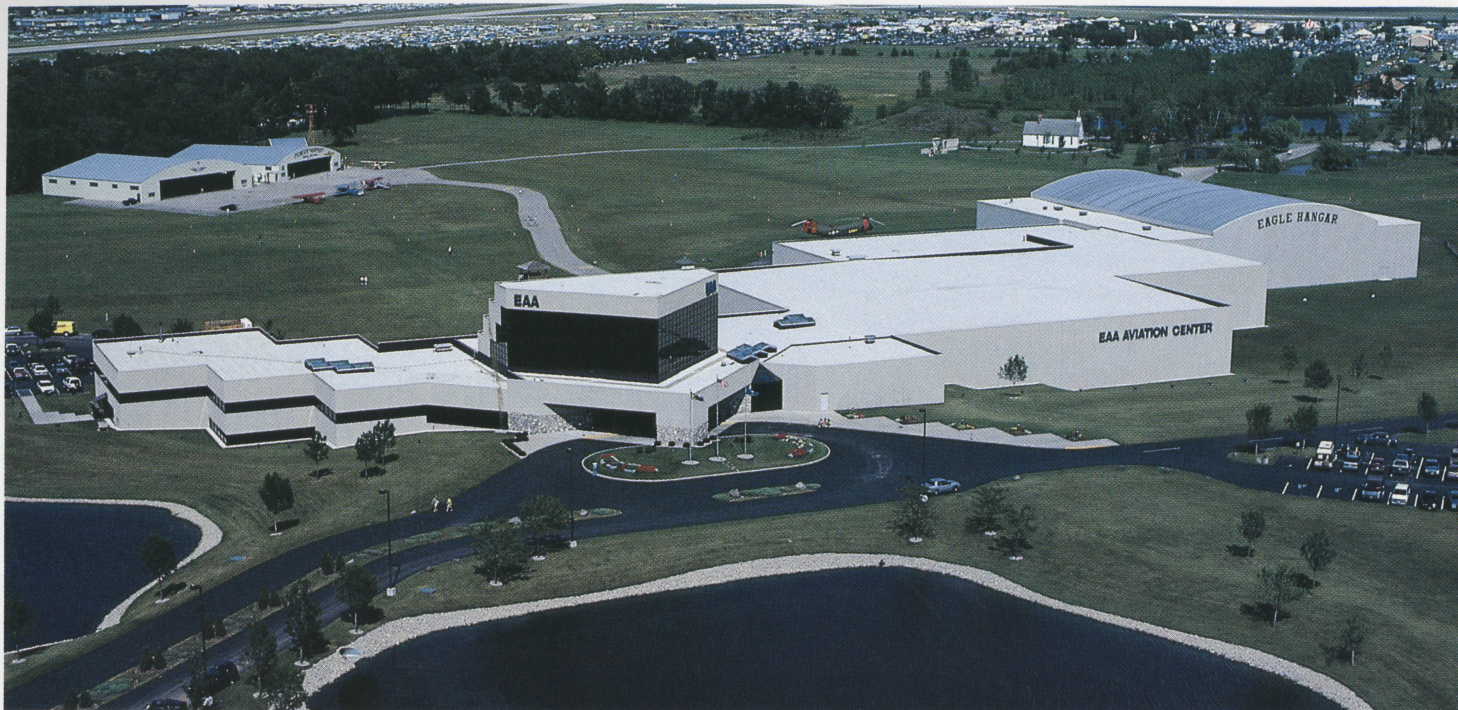
Thirteen years later, at age 60, Withrow's biplane was completed. And what a thing of beauty it was! Workmanship was outstanding. His determination was rewarded and his standards of excellence recognized when the aircraft was flown to the 1985 EAA Oshkosh Convention — piloted by Withrow — where it was named Reserve Grand Champion for a plans built aircraft. A tremendous honor — well deserved. It was just one of many awards in store for this outstanding aircraft and its builder. Withrow's dedication — like that of many other builders in EAA — is just one more example of what aircraft homebuilding is about — this "can-do" attitude that makes the homebuilder **SOMEONE SPECIAL!**

Right — N2X, a Rutan designed Long-EZ was built by George Nopper, Tuscon, AZ. After flying the aircraft for three years and some 300 hours it was sold in 1989 to Rob Eckes. At the 1991 EAA convention Nopper and Eckes were awarded Grand Champion honors in the plans built category for this really outstanding homebuilt. It had a total of 350 hours logged at the time, yet remained in pristine, perfect condition. Engine is a Lycoming O-235-L2C with a Warner Almost Constant Speed prop.

FOR PURPOSE

PART I





The EAA Aviation Center — fabulous world headquarters for the Experimental Aircraft Association and the EAA Aviation Foundation Museum. Located at Oshkosh, Wisconsin, adjacent to Wittman Airfield, site of the world's largest aviation event — the annual EAA Oshkosh convention.



Our Purpose

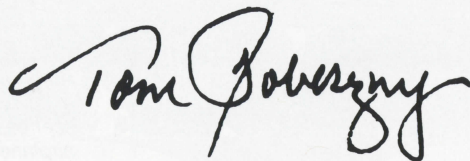
Long ago, the need was recognized by the Experimental Aircraft Association for a specifically prepared guide for the amateur aircraft builder. Many changes for the better have followed the amateur built aircraft movement as the result of EAA and its members and the high standards they have set. Standards that have been followed by the amateur builder that have earned the freedoms and opportunity of building and flying your own aircraft plus the many antique, warbird, and unique factory built aircraft operating with Experimental Airworthiness Certificates. We have earned the cooperation and respect of the Federal Aviation Administration as well as the aviation public.

The Experimental Aircraft Association is an organization of members with many talents and interests. It includes aircraft designers, builders and restorers who preserve our aircraft history, including antiques, classics and many of our military aircraft . . . "warbirds". EAA has brought them all together to share this varied interest in aviation.

This Custom Built Aircraft Handbook . . . a guide to construction standards and the FAA rules and requirements for the amateur aircraft builder . . . is in the fourth printing with changes in FAA requirements being brought up-to-date. For requirements in other countries, contact EAA Headquarters.

Aeronautical standards recognize no country's boundary lines. These accomplishments were learned and earned by the many dedicated aviation engineers, hobbyists and pilots since the beginning of flight. It is recommended that the material contained in this handbook be used as a guide in the construction, maintenance, registration and flying of homebuilt aircraft and other such aircraft operating with experimental certificates.

Other than the mandatory applicable FAA FARs, the detailed recommendations contained herein should not be construed as being regulatory or restricting advanced designing or use of newer, and possibly better, materials or construction techniques, but rather as a solid foundation on which to build.



Tom Poberezny
President

EXPERIMENTAL AIRCRAFT ASSOCIATION



Your Responsibilities

(As A Custom Aircraft Builder)

For well over three decades, and since the founding of the Experimental Aircraft Association, the amateur aircraft builders have proven themselves among the most dedicated of aviation enthusiasts. For in this wonderful aeronautical world, seldom do we find people who can design, build and test fly their own creation, and then some share their design with other creative and self-educated aircraft builders.

The amateur aircraft builder of today has earned over these past thirty-three years great freedom as the result of high construction maintenance and flying standards. It is the responsibility of each person who builds his own aircraft to remember that he is not alone . . . his or her very action in building and flying the machine he has created with his own hands affects every other person who is doing the same thing. Poor workmanship or poor flying by a homebuilder in Texas many ultimately take away the privilege of homebuilding from a fellow in Maine. Too many accidents and tragedies combined with political pressures from a non flying public and the right to homebuilding can be revoked, as it was in the past. With a good safety record and ever improving aircraft, we homebuilders can carry on the pleasure of flying . . . purely for sport and for the fun of it.

Maintaining a record of your aircraft construction . . . materials used . . . covering . . . tubing . . . aluminum . . . steel . . . paints, etc. . . . of the various component parts . . . is very important, especially if the aircraft is sold to another and information is needed to maintain or repair the aircraft in the event of a mishap. From a legal standpoint, it could possibly show sincere responsibility on the part of the builder in the event of a questionable mishap.

The EAA has for a number of years had available to builders an EAA Service Manual which, when completed, is a valuable source of history and information. We encourage you to add this to your EAA Amateur Built Aircraft Log.

A homebuilder's dream world becomes reality at the annual EAA Oshkosh Convention. These scenes of wall-to-wall airplanes — people with airplanes on their mind — smiles on their faces — were taken at the 1990 Convention. Top photo shows the famous archway that leads to the fantastic flight line where every type of aircraft is on display — hundreds of homebuilts of unbelievable workmanship, innovation and design. The seven-day EAA Oshkosh Convention is the world's largest aviation event.



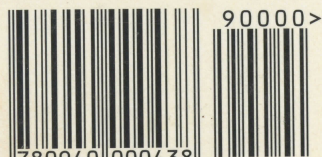


A NON-PROFIT ORGANIZATION DEVOTED TO THE HISTORY AND
DEVELOPMENT OF SPORT AVIATION

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