Yesterday's Wings

The Aeronca Champion

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■■ Recent publicity has made much of the fact that the Beech Bonanza has been in continuous production for 30 years. While not as apparent because of changes of name, manufacturer, and plant, there is another basic model around that tops the Bonanza by seven years but has a few gaps in continuity.

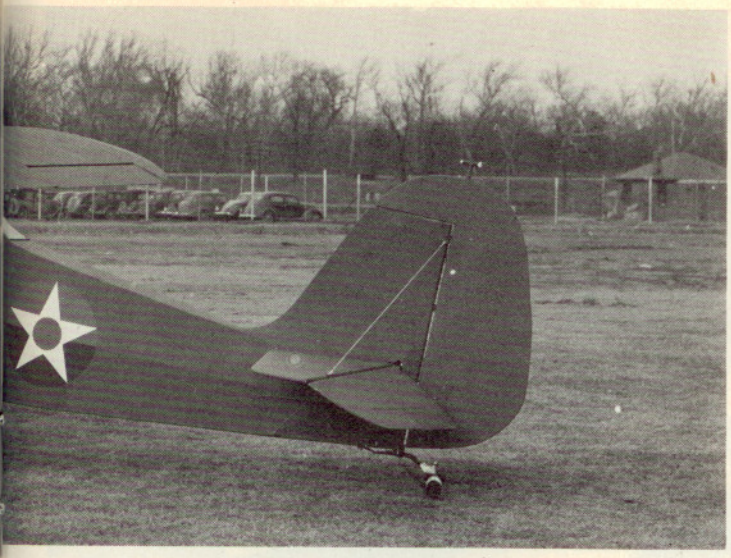
This is the tube-and-fabric two-seater that appeared in 1940 as the Aeronca Tandem, became the Defender and Champion under Aeronca through 1950, then the Traveller, Olympia, and Citabria after a new firm called Champion Aircraft Corp. put it back in production in 1954. Then came Champ, Scout, and finally Decathlon after Bellanca took over Champion in 1970. Since full coverage of all these variants would take up several articles, only the Aeronca versions will be covered here.

The Defender was the civil equivalent of the Army O-58A/L-3A model. Note the missing propeller. The rudder came off next to comply with a directive to make private aircraft in the Western Defense Zone unflyable soon after the Pearl Harbor attack.

The word Aeronca was an acronym for Aeronautical Corp. of America, founded in Cincinnati in 1928 to market the C-2, the production version of a homebuilt ultralight built by Chief Engineer J. A. Roche in 1924 when employed by the Army Air Service Engineering Div. This 30-hp single-seater quickly developed into the 36-hp, side-by-side, two-seat C-3 that remained in production through 1936 and then was replaced by the side-by-side Model K in 1937. This evolved into the Chief in 1939.

A totally new model appeared in 1940. Initially identified as the T because of its tandem seating, it was available in TC, TF, and TL models to use the three leading flat-four lightplane engines of the time, the 50- to 65-hp Continental, Franklin, and Lycoming. In spite of the powerplant differences, all were produced under Approved Type Certificate (ATC) 728, with the power being included in the designation, as 65-TC.

Designed by James A. Weagle, the configuration and structure were thoroughly conventional, with the occu-



The early O-58s for the U.S. Army were stock Aeronca 65-TC models of 1940-41. Redesigned fuselages with extensive window area resulted in the O-58A (O-58B shown). The O-58s became L-3s in 1942.

THE AERONCA

	DEFENDER 1941	CHAMPION 7-AC 1945	CHAMPION 7-EC 1949
Specifications			
Powerplant	Continental A-65 65 hp @ 2,350 rpm	Continental A-65 65 hp @ 2,350 rpm	Continental C-90 90 hp @ 2,475 rpm
Span	35 ft	35 ft	35 ft
Length	21 ft 10 in	21 ft 6 in	21 ft 6 in
Empty Weight	750 lb	710 lb	890 lb
Gross Weight	1,200 lb	1,220 lb	1,450 lb
Performance			
High Speed	95 mph	100 mph	110 mph
Cruising Speed	87 mph	90 mph	100 mph
Initial Climb	450 fpm	500 fpm	800 fpm
Service Ceiling	12,000 ft	—	—
Range	225 mi	270 mi	350 mi

The Model 7-AC Champion of 1945 was an extensive redesign of the prewar Defender intended to compete more effectively with the Piper J-3 Cub. One advantage was that the Champ could be flown solo from the front seat.

pants at dual stick controls and all instruments on a single panel ahead of the front seat. The welded steel tube fuselage had four longerons in the cabin area but had three-longerons aft as did the old C and K models. The external appearance of four longerons was achieved through the use of wooden formers and stringers. The wing spars and ribs were wood and the airfoil was the reliable old Clark Y of 1922 vintage.

With U.S. participation in World War II getting close, the Army developed an interest in light airplanes for use as observation and liaison types, and bought four 65-TCs from Aeronca under the designation of YO-58, plus four each from competitors Piper and Taylorcraft. The YO-58s did so well that the Army ordered 50 production versions and then had Aeronca do a redesign known as the O-58A that featured extensive changes. The fuselage was made four inches wider, construction was changed to four longerons for the full length, and extensive glasswork was added around and behind the cabin to increase the observer's field of view.

A corresponding civil model without the glasswork was developed late in 1941 and called the Defender. The airfoil was changed to the NACA 4412, and the ribs were stamped aluminum. Because of the structural changes, this craft got a new ATC, 751. At this time, the company changed its name to Aeronca Aircraft Corp.

Civil production ended early in 1942, but the Army models kept going. The 20 O-58s were followed by 335 O-58Bs. At this time, the Army dropped the O-for-Observation designation for lightplanes and substituted L-for-Liaison; the O-58s became L-3s. There were 540 duplicates of the O-58B built as L-3B. Production wound up with 490 L-3Cs after the Army bought 26 miscellaneous Ts from private owners and assigned designations from L-3D through L-3J. After the war, surplus L-3As, Bs, and Cs could be licensed as civil aircraft under ATC-751 while the earlier-style airframes reverted to ATC-728.

While Piper and Taylorcraft prepared to go into postwar production with their unaltered prewar J-3 and BC models, Aeronca designed a new model that combined features of the prewar Ts and the Defender. This was the Model 7-AC Champion. The fuselage reverted to the old three-longerons-aft style, the

The final civil Champion model built by Aeronca was the 7-EC, with 90-hp, the dorsal fin of the L-16B, and an electrical system.

engine was fully cowled, and the windows were enlarged, although not to the extent of the Army models. The powerplant was the same 65-hp Continental A-65. A significant advantage over the directly competing Piper J-3 Cub was the fact that the Champion could be flown solo from the front seat. All the changes justified a new ATC, 759.

The 65-hp Champion sold like hotcakes for a while in the short-lived postwar lightplane boom, but there soon was a demand for more performance. Aeronca took care of this by installing an 85-hp Continental C-85 in the 7-DC version. Earlier, the Army had become interested in lightplanes for liaison again and ordered 509 of the 85-hp 7BC models in 1947 as the L-16A. These were structurally identical to the Champions except for the addition of the old O-58A/L-3A style glasswork. A further 100 articles with 90-hp Continental C-90s were designated L-16B and were distinguished by the addition of a long dorsal fin.

Aeronca matched the L-16B with the civil 7-EC model which also used the 90-hp engine and the dorsal fin. Since they were produced so close to the end of the line, there were relatively few of the 7-EC models.

Unfortunately, the lightplane boom collapsed in 1948 and the Champion soon went out of production after Aeronca had produced some 10,000. By far the most popular was the 65-hp 7-AC, with 7,200 built between 1946 and 1948. According to the latest FAA figures, there are still 4,588 7-ACs on the civil register. Aeronca ended production of complete airplanes in 1950.

The Army gave its only postwar ultralight business to Aeronca for 85-hp L-16A versions of the Champion (shown) and 90-hp L-16Bs with dorsal fins.

Champion Aircraft Corp. was formed at Minneapolis, Minn., to take over the Champion line from Aeronca and put it back in production. Although the new firm gave the airplane a new name, it was produced under the same old ATC and Aeronca model numbers. Champion's production started with the same old 7-EC marketed under the name of Traveller.

In 1957, Champion introduced the 7-FC variant, which was the same airframe fitted with tricycle landing gear and called the Tri-Traveller. Champion's major contribution to the evolution of the design was a beefed-up structure for an aerobatic trainer version introduced in 1964 as the Citabria (Airbatic spelled backward). As already mentioned, Champion marketed other variants under different model names before merging with Bellanca at Alexandria, Minn., in 1970. Bellanca then introduced further named variants of the old 1940 taildragger and is still producing it in 1977. □